



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/657,582 Confirmation No. 9887
Applicant : Robin G. Skinner
Filed : September 8, 2003
Title : COMPRESSOR DISCHARGE ASSEMBLY
TC/A.U. : 3748
Examiner : Theresa Trieu
Atty. Docket No. : TEC1216
Customer No. : 0832

37 C.F.R. §1.131 DECLARATION OF ROBIN G. SKINNER

I, Robin G. Skinner, declare as follows:

1. A compressor, incorporating the subject matter of all pending claims in the present application, was conceived and reduced to practice prior to October 5, 2001.
2. Said compressor was conceived as early as July 9, 2001. An Invention Disclosure Form documenting said conception is attached hereto. I signed said Disclosure Form on October 3, 2001. At least one witness, David K. Haller, also signed said Disclosure Form on October 3, 2001.
3. Said compressor was assembled on or about July 18, 2001.
4. Said compressor was tested on or about July 22-24, 2001. Two reports documenting said testing are attached hereto, each entitled Tecumseh Products Company Scroll Buildup Sheet and Test Request, and are redacted where appropriate.
5. Components of said compressor are illustrated in drawing EXDISA2405, drawn August 30, 2001. This drawing is attached hereto.
6. All statements made herein are true and that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of any application, or patent issuing therefrom. Further, in accordance with §1746 of Title 28 of the United States Code, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on: 11-21-2005, 2005.

ROBIN G. SKINNER



TECUMSEH PRODUCTS COMPANY
INVENTION DISCLOSURE

TEC 1216

DISCLOSURE NO.: C-508

DATE RECEIVED: _____

INVENTOR (S) (PLEASE PRINT): Robin Skinner

TITLE OF INVENTION: Discharge End Cap and Tube Design for Horizontal Scroll Compressor

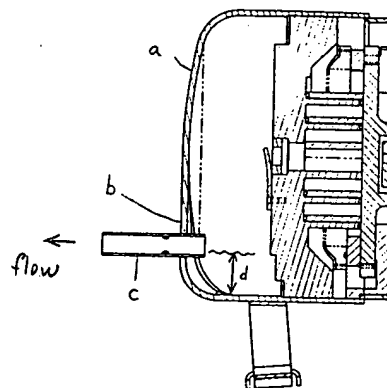
PURPOSE OF INVENTION: Prevention of excessive oil accumulation in the lowest portion of the discharge plenum.

BRIEFLY IDENTIFY THE CLOSEST PREVIOUSLY KNOWN APPROACH TO YOUR INVENTION, AND THE ADVANTAGES WHICH YOUR INVENTION PRESENTS THEREOVER:

Copeland and Hitachi horizontal scrolls.

DESCRIPTION AND SKETCH:

End cap "a" has flat portion "b" for optimum weld or braze to affix discharge tube "c". This tube and flat are located at the lowest region of the periphery, so as oil accumulates to a minimized level "d" it is carried away by the normal discharge vapor flow.



DATE OF CONCEPTION: 7-9-01 CONCEPTION RECORDED IN NOTEBOOK NO.: _____ PAGE: _____

PROJECTED EARLIEST PRODUCTION OR RELEASE DATE: 6/28/02

WITNESSED AND UNDERSTOOD BY:

[Signature] 10, 3, 01
[Signature] 10, 3, 01

[Signature]
SIGNATURE (S) OF INVENTOR (S)

10-3-2001
DATE OF SIGNATURE (S)

DEPARTMENT & TELEPHONE EXT. _____

IF THE SUBJECT OF THIS DISCLOSURE HAD BEEN BUILT, PLEASE COMPLETE THE FOLLOWING:

BUILT: / / TESTED: / / RECORDED IN NOTEBOOK NO.: _____ PAGE: _____

FIRST COMMERCIAL USE OR PRODUCTION DATE: / /



TECUMSEH PRODUCTS COMPANY
SCROLL BUILDUP SHEET AND TEST REQUEST

SEND TO Moose FOR SCHEDULING

BUILD UP # : HSC1 001	S / N : 700001	DATE : 7/22/01						
MODEL : SA9538ZXT	DISPLACEMENT : 5.4 in ³	ECN # : 240078						
OIL CHARGE : Mobile EAL Artic 32 oz.	REFRIGERANT : R-404							
MOTOR : PCS	VOLTS : 200/230	FREQ : 60						
PHASE : 3		RUN. CAP : none						
MANUFACTURER : Paris	MOTOR # : N/A	ROTOR # : R8622						
STATOR # : N/A								
RESISTANCE : MAIN :	Ohms	START :						
Ohms	COMMON :	Ohms						
IN - LINE FUSE : 50	Amps	LRA : N/A						
Amps	TRM # : N/A							
OVERLOAD # : HM35								
ASSEMBLY INSTRUCTIONS : ASSEMBLED BY : dev lab		DATE : 7/18/01						
CODE DATE :								
FIXED SCROLL # : Danfoss Maneurope		ORBITING SCROLL # : Danfoss Maneurope						
AIRGAP MIN : .020 in @ O'CLOCK : AIRGAP MAX .020 in @ O'CLOCK :								
Change oil between tests								
PURPOSE OF TEST : Build the first HSC1 compressor								
TEST INSTRUCTIONS								
TEST AREA :								
Run on loadstand at 20/120 F		<table border="1"><tr><th>INITIALS</th><th>DATE</th></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>	INITIALS	DATE				
INITIALS	DATE							
In a few hours remove and inspect scroll sets								
DISPOSITION AFTER TEST : Hold in Dev Lab								
OIL OUT AFTER TEST : Oz								
REMARKS : First build of concept 1 horizontal commercial back scroll								
RAN Approx 3 hrs scrolls look good To be								
Rebuilt AS IS								
REQUESTED BY : R. Skinner 8145								



TECUMSEH PRODUCTS COMPANY
SCROLL BUILDUP SHEET AND TEST REQUEST

C-5 (2)

SEND TO Moose FOR SCHEDULING

BUILD UP # : HSC1 001A		S / N : 700001		DATE : 7/23/01					
MODEL : SA9538ZXT		DISPLACEMENT : 5.4 in ³		ECN # : 240078					
OIL CHARGE : Mobile EAL Artic 32 oz.				REFRIGERANT : R-404					
MOTOR : PCS		VOLTS : 200/230	FREQ : 60	PHASE : 3	RUN. CAP : none				
MANUFACTURER : Paris		MOTOR # : N/A		ROTOR # : R8622	STATOR # : N/A				
RESISTANCE : MAIN : .485		Ohms	START : .490	Ohms	COMMON : .500				
IN - LINE FUSE : 50		Amps	LRA : N/A	Amps	TRM # : N/A				
OVERLOAD # : HM35									
ASSEMBLY INSTRUCTIONS : ASSEMBLED BY : dev lab				DATE : 7/18/01					
FIXED SCROLL # : Danfoss Maneurope				ORBITING SCROLL # : Danfoss Maneurope					
AIRGAP MIN : .020 in @ O'CLOCK : AIRGAP MAX .020 in @ O'CLOCK :									
Change oil between tests									
PURPOSE OF TEST : First cal test of concept 1 horizontal commercial back scroll									
TEST INSTRUCTIONS									
TEST AREA : 152735 152736									
<table border="1"><tr><td>INITIALS</td><td>DATE</td></tr><tr><td>CB</td><td>7/24/01</td></tr></table>						INITIALS	DATE	CB	7/24/01
INITIALS	DATE								
CB	7/24/01								
Cal: 1. Test Misc Spec 4 # 3B.2 / W OCR 152759									
2. Tests #3B.6									
3. Test # 3A.2 W OCR									
Note: Watch oil level in sight glass some foam may be present									
DISPOSITION AFTER TEST : Hold in Dev Lab									
OIL OUT AFTER TEST : Oz									
REMARKS : First cal test of concept 1 horizontal commercial back scroll									
REQUESTED BY : R. Skinner 8145									

TECUMSEH PRODUCTS COMPANY
CALORIMETER DATA SHEET

TEST DOCUMENTATION:

PURPOSE OF TEST: DEVELOPMENT

TEST DATE: 7/24/01

ROOM NUMBER: CAL 14

BILL OF MATERIAL HCS1001A

COOLING METHOD: (2) 425 CFM FANS

SERIAL NUMBER: 700001

CODE DATE: G2301

PLANT OF MANUFACTURE: DEVEL. LAB

REFRIGERANT: R-404A

REQUESTING ENGINEER: R. SKINNER

REPORT NUMBER:

PROJECT NUMBER: 240078

MODEL NUMBER: SA9538ZXT

DISPLACEMENT (CU IN): 5.4

MOTOR MANUFACTURER TP. CO. PARIS

MOTOR SPECIFICATIONS: VOLTAGE: 230/200

PHASE: 3 FREQUENCY: 60

CUSTOMER NOTIFICATION NUMBER 3B.2

TEST NUMBER: 152735

TEST MEASUREMENTS:

PRESSURES: PSIA (kPa)

SUCTION PRESSURE:

DISCHARGE PRESSURE:

VAPOR PRESSURE:

BAROMETRIC PRESSURE:

TEMPERATURES: Deg F (Deg C)

EVAPORATOR TEMP.:

CONDENSING TEMP.:

SUPERHEAT TEMP.:

SUBCOOLING TEMP.:

SUCTION TEMP.:

DISCHARGE TEMP.:

LIQUID INTO EXP VALVE:

VAPOR OUT OF CAL TANK:

TEST CHAMBER AMBIENT:

ELECTRICAL MEASUREMENTS:

FREQUENCY:

COMP. VOLTAGE (AVG.):

COMP. CURRENT (AVG.):

COMP. WATTS:

CALORIMETER WATT-HR:

WATTMETER CONST. (kH):

POWER FACTOR (CALC'D):

VOLTAGE (L1-L2):

VOLTAGE (L1-L3):

VOLTAGE (L2-L3):

CURRENT - PHASE 1:

CURRENT - PHASE 2:

CURRENT - PHASE 3:

MOTOR RPM:

REFRIGERATION RESULTS: Calculations Based on Dew Point Pressures

MASS FLOW RATE (CAL):

MASS FLOW RATE (MEAS):

VOLUMETRIC EFFICIENCY:

CORRECTED CAPACITY:

EFFICIENCY:

ISOENTROPIC EFFICIENCY:

DEVIATION ANALYSIS:

DESCRIPTION

NOMINAL

ACTUAL

DEVIATION

COMP. POWER (WATTS):

0.00

0.00%

AVG. COMP. CURRENT (AMPS):

0.00

0.00%

CAPACITY (BTU/HR):

0.00

0.00%

EER (BTU/WATT):

0.00

0.00%

TEST TIME: 3.75 HOURS (TOTAL)

TEST OPERATOR: MAXWELL

cc: